



NEW YORK WING, CIVIL AIR PATROL



AEROSPACE EDUCATION NEWSLETTER ONLINE

January – February 2021



Credit - David Chilenski – Light show at the end of flight (Nov 2020)



Quality Cadet Unit Award

List of 2019/2020 Winners

NER-NY-022	Buffalo Composite Squadron #1
NER-NY-033	Putnam County Composite Squadron
NER-NY-048	Westchester Cadet Squadron 1
NER-NY-111	Newark Composite Squadron
NER-NY-116	Niagara Falls Composite Squadron 1
NER-NY-117	Col Francis S. Gabreski Cadet Squadron
NER-NY-147	Academy Cadet Squadron
NER-NY-153	Leroy R. Grumman Cadet Squadron
NER-NY-159	Dutchess County Cadet Squadron
NER-NY-212	Canandaigua Composite Squadron
NER-NY-238	Col Johnnie Pantanelli Composite Squadron
NER-NY-253	Batavia Composite Squadron
NER-NY-273	Rochester Composite Squadron
NER-NY-283	Twin Tiers Cadet Squadron
NER-NY-288	Lt. Quentin Roosevelt Cadet Squadron
NER-NY-301	Phoenix Composite Squadron
NER-NY-311	9th Suffolk Cadet Squadron
NER-NY-332	The Spirit of Tuskegee Cadet Squadron
NER-NY-351	Dunkirk Composite Squadron
NER-NY-354	Condor Composite Squadron
NER-NY-384	Brooklyn Tech Cadet Squadron #1
NER-NY-388	James P. O'Connor Composite Squadron
NER-NY-417	Stalwart Cadet Squadron
NER-NY-422	Lt Anthony L. Willsea Cadet Squadron

*Information copied from NHQ's web site

Congratulations to the twenty-four* NYW squadrons that earned the **QCUA** certificate, emblem and streamer for their 2020 activities – and **we tip our hat to our AEOs** who *contributed* to this success!

Our AEOs have a direct impact on whether or not their squadron earns the QCUA; five out of seven activities are needed to win AND three of those are directly AE and AEO related!

- Guiding AE sessions that help cadets understand the concepts and history presented in their Aerospace Dimensions booklets to pass their AE tests and earn their promotions (at least 40% of cadets to earn their Wright Brothers Milestone to earn a point)
- Completing an AEX program (by 31 August) and/or sending in an After-Action Report after ordering a STEM kit
- Leading cadets to participate in a STEM Competition such as: TARC, StellarXplorers, or UAS4STEM



AE EDUCATOR 101

By Lt Col Anita Martin, Director Aerospace Education



Replica of Montgolfier balloon on display in the National Air & Space Museum (Credit - Aerospace Dimensions)

Background: When the CAP School Program began, it typically was staffed with school educators who operated on a yearly curriculum. To assist the teachers, a school training plan was given to them. Today, that training plan is *available to all units* and is located on the CAP national website, in the Cadet Library. Go to:

www.gocivilairpatrol.com/programs/cadets/library

This is a full 24-month plan to get through the first two leadership books (along with applicable leadership activities), all six AE Modules (also with applicable activities), model rocketry and AEX! We want to give you ways to extend your AE training to receive more credits for less work!

➔➔➔ This January/February Wing Tips takes a look at the Cadet Programs' Cadet Library, Squadron Training Plan for the **13th month**. It schedules Aerospace Dimensions, (AD) *1.3 Balloons – They Create Their Own Thermals*. We learn the principle of buoyancy, the history and components of a

balloon. To help reinforce the understanding of how a hot air balloon works, AD Activity 8 is the Hot Air Balloon. As we look for a corresponding Activity in AEX, the Training Plan gives us the activity, *AEX II Vol 1.18, Hot Air Balloons – The First True Powered Aircraft*. Cadets can construct their own balloon from plastic film according to AD or order a tissue kit. Years ago, our squadron ordered a kit that had a camera to take pictures as it rose. Looking for similar tissue kits, we discovered, all are out of stock. However, there are interesting build-it-yourself sites: <https://www.motherearthnews.com/diy/tissue-paper-hot-air-balloon-zmaz81mazraw>.

This one http://www.sciencemadefunatl.net/downloads/tissue_paper_balloon.pdf gives a wonderful insight into the first Montgolfier balloon, which is on display in the Air and Space Museum.

The **14th month** introduces the booklet, *Let's Go Flying (LGF)* – from the *Drug Demand Reduction Program*, Educational Programs Directorate, with *Part One – Introduction to the world of Aviation*. This will raise the awareness of how the aviation industry has a zero tolerance for alcohol and drug abuse.

You have two bangs for the buck with Aerospace Dimensions *and* AEX plus two bangs for the buck with Aviation and CAP's Drug Demand Reduction zero-tolerance message.

Once again, that's **ONE CREDIT FOR DOING AEROSPACE DIMENSIONS activity and ONE FOR AEX CREDIT!** **Again, that's 2 Bangs for your Buck!!** Stay tuned for the **March/April** Edition of Wing Tips for more exciting AE Educator 101 tips to get more "Bang for your buck"! ➔➔➔



AEROSPACE HISTORY

Celebrating the Pioneers and the Achievements of the Past

Compiled by Lt Col George Geller

Emily Howell Warner – A Trailblazer for Female Airline Pilots

Emily Howell Warner was the first woman to earn the airline rank of Captain. At 21 years old, Warner had already received her pilot's license and was working as a flight instructor in addition to continuing to rise through the ranks with the goal of becoming an airline pilot. In 1973, Warner's dreams became reality when she was hired by Frontier Airlines. This position made her the first woman hired by a scheduled U.S. passenger airline as a permanent pilot since Helen Richey was hired as a co-pilot for Central Airlines in 1934. This was then followed by her becoming the nation's first woman airline captain only three years later.



On 3 July 2020, Warner passed away, but will forever be remembered for the path she blazed that paved the way for women pilots to persevere and grow through the hardships and experiences of being a woman pilot. Warner was inducted into the National Aviation Hall of Fame and National Women's Hall of Fame. Her pilot's uniform is on display at the Smithsonian's National Air and Space Museum. (Source – FlyGirls)

Transcontinental Air Transport and the Origins of Cross-Country Flying



Transcontinental Air Transport had the idea to encourage cross-country flying. Enlisting the aid of Charles Lindbergh, the concept was that passengers would travel by train at night and fly by day. Henry Ford refused to help fund the project but did agree to supply a Ford Trimotor aircraft.

The trip from NY Penn Station to Los Angeles cost \$352 (\$5,327 in today's dollars) one way and took 48 hours. To inaugurate the first flight in 1929, a Ford Trimotor was brought inside Penn Station (unable to fit through the doors, it was taken apart and reassembled inside the station).



Ford Trimotor inside Penn Station, NYC

Amelia Earhart – “Lady Lindy,” broke a champagne bottle on the propeller. Passengers were offered meals through the Fred Harvey Company, famous for having restaurants serving train passengers. The concept was not successful, some pundits calling TAT, “Take A Train.” Eventually after some mergers TAT became TWA, Trans World Airlines, also known as “The Lindbergh Line”



(Share these stories with your squadron members and add them to your library of AE Resources!)

Willa Brown – Aviator, Lobbyist, Teacher, and Civil Rights Activist



Courtesy of the National Archives

Black History Month is celebrated every February to recognize the achievements of African Americans who have shaped American history. Lt Willa Brown is an example of an American who had an impact on many aspects of our society. Recognized as the first black officer in the Civil Air Patrol, Brown also became a champion for equality and civil rights. Born in Kentucky in 1906, she went on to earn a B.S. degree from the Indiana State Teachers College where she graduated in 1927 and later, she earned an M.B.A. from Northwestern University. After becoming a teacher she ultimately sought other pursuits that would test her abilities and decided to learn to fly.

She studied with Cornelius R. Coffey, a certified flight instructor at one of Chicago's racially segregated airports and became the first black woman to earn a private pilot's license as well as an aircraft mechanics license in 1938. With Coffey, she established the Coffey School of Aeronautics at Harlem Airport in Chicago and trained many black pilots who would later become part of the WWII Tuskegee Airmen. Brown later became an activist for racial equality and lobbied the government for integration of black pilots into the segregated Army Air Corps and the federal Civilian Pilot Training Program.

In 1942, she attained the rank of Lieutenant in Civil Air Patrol Squadron 613-6, becoming the first black officer in the CAP. Brown dedicated her life to helping others and was active in all aspects of her community, helping people achieve their dreams. Brown died July 18, 1992, at age 86.

Source - <https://www.cap.news/willa-brown-pioneer-for-female-african-american-aviation/>



USING THE SQUADRON AEROSPACE EDUCATION ACHIEVEMENT AWARD AS YOUR PLAN OF ACTION (POA) - Update

During the last issue we reported that IAW CAPR 50-1, 9 Nov 2020, National HQ no longer requires *squadrons and groups* to submit an electronic Plan of Action (POA). **The NYW AE staff still strongly recommends** that each squadron and group prepare its own POA to ensure you achieve your AE objectives *and* assess your results. *Developing a POA can be confusing so to spur you on the NYW AE staff has endorsed using the Squadron Aerospace Education Achievement Award as your POA. We have created a template for AEOs and CCs to help them fulfill the new requirement for a (notebook or digitally documented) discussion between the AEO and CC to discuss the AE activities planned for the year.*

In order to earn the Squadron AE Achievement Award, a squadron must perform eight of the tasks listed on the achievement award requirements in [CAPR 50-1, Att 5](#). The first four tasks are *required*, but the others vary between internal and external AE programs that provide each squadron with the flexibility to develop a balanced program that suits their needs and resources. **Set a goal for your squadron to earn the Squadron AE Achievement Award and your POA will follow. It's not too late to get started.**

In fiscal year 2020, 13 squadrons achieved this recognition and 11 in 2019. **For 2021, the NYW has set a goal for 26 squadrons, double our 2020 number, to earn this award.**

This will also help the NYWG achieve **OUR** own goal, to receive the 2021 AE Mission Award that identifies the best wing in AE in the Region. **Working together we can inspire our members on all things aerospace and further the CAP mission. You can access the 2021 Roadmap POA form at: <https://nyw.cap.gov/ae>**

LOGIC AND PUZZLE SECTION **From CAP Aerospace Mini Book of Logic and Puzzles** **By Lt Col Anita Martin, DAE**

In each *Wing Tips* issue, we are providing you with a Critical Thinking Puzzle from *the Civil Air Patrol Aerospace Mini Book of Logic and Puzzles*. The Civil Air Patrol believes that “Critical Thinking” is a valuable skillset for leaders, and it devotes a whole chapter to it in the LEARN TO LEAD: VOLUME TWO: TEAM LEADERSHIP, Ch 5: Brain Power for Leadership; Principles of Critical Thinking:

.... critical thinking is the habit of being guided by universal values of logic and a deep respect for the truth. As with other aspects of leadership, becoming a critical thinker is more a journey than a destination. Everyone is subject to lazy thinking or irrational thought from time to time. Therefore, developing the ability to think critically is a lifelong endeavor, a never-ending process.

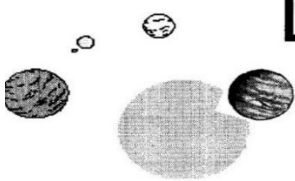


“[Critical thinking] is a desire to seek, patience to doubt, fondness to meditate, slowness to assert, readiness to consider, carefulness to dispose and set in order; and hatred of every kind of imposture.”

SIR FRANCIS BACON - One of the first thinkers to use the scientific method

This issue’s Critical Thinking puzzle is “It’s All in the Name”

Directions: This is a space environment research exercise. Work solo or with a partner to find names which start with the letters at the top of the grid and are constellations, stars, planets, moons and asteroids. As an extra activity discuss additional facts about each of these elements of the space environment. (Solution on Page 9)

	M	P	S
Constellations			
Stars			
Planets			
Moons			
Asteroids			

CONDUCTING AEROSPACE EDUCATION IN A VIRTUAL WORLD

Capt Burt Dicht, NYW External AEO



Operating in an engaging and consistent manner during the pandemic has challenged us all to be innovative and to demonstrate a willingness to try new things. That does not mean we will always succeed, but we need to make the effort to ensure we are continuing with our aerospace education mission. In my home Phoenix Composite Squadron, we went virtual early on and have been conducting at least one AE meeting per month. We have even included STEM kit activities.

From the start it was important that these virtual meetings were not lectures, that they would include cadet and senior member “homework.” And it has worked well up to now, as we have incorporated some “at-home” builds that only required household items. Now that we’re almost a year into this new operating mode, I have started to see a drop off in participation and that concerned me.

During my last meeting in December I asked the participating cadets for their thoughts. They were very honest and indicated they missed designing and building things. I had been reluctant to assign regular AEX activities because I was unsure if everyone would have access to the needed materials. It was clear at this point that I needed to act, and as I noted above, it was time to try something new.

I offered to create a home AEX kit and ship it out to everyone as long as they committed to participating. The cadets and senior members conduct the activity at home and then we will meet virtually to share and review the results. The response was very positive, and it was up to me to figure out how to fulfill that promise. I knew this would involve additional work on my part, but I was looking at its potential impact and I saw it as a learning opportunity.

The first step was in determining which activities to offer. I went through all of the AEX booklets in order to identify up to ten activities I thought could be completed at home without direct supervision. Once I had those identified I wanted the members to be involved in selecting the activities we would use. So I created a survey using Google Forms and asked the members to select their top four.



Home AEX Survey

The members came through and responded with their choices. I actually selected the top five. The five activities are:



Home AEX Kit Materials

- The Fizzy Flyer
- Marta Bohn Meyer and the SR-71 Blackbird Model
- Building the USAF Academy TG-4A Glider
- Scott Crossfield and the X-15
- Harriet Quimby and the Bleriot XI

Now it was time to start building the kits. CAP’s AEX program (*see below AE Downloads and Resources*) made this a little easier, as many of the activities make use of the same materials such as pipe insulation and Styrofoam vegetable/meat trays. I was able to create a master list of all the materials I needed, compared it with what I had in my own inventory and then I developed the list of additional materials that I had to purchase.

Luckily, I had some volunteer experience over the years with sorting materials and getting them packaged for shipment. Perhaps my engineering background helped as I was able to get it all organized, collated and packed in just a few hours. In the shipment I included the materials, a materials list, and the instructions for the five activities

Then it was time to ship the kits. The USPS seemed the most cost-efficient approach. I had fifteen boxes to ship. I ended up making three trips to the post office and it all went well. They were sent “priority” so that I had a tracking number. During the survey I had asked the members who wanted a kit to include their shipping address, so I had the most current information. In all I spent about twelve hours, from inception to shipping in creating the kits and each kit cost approximately \$19, including postage. As of this publication all of the kits have been received and we are about to schedule the first activity. In the next issue I will provide an update on how I prepared each activity and how the first few went.

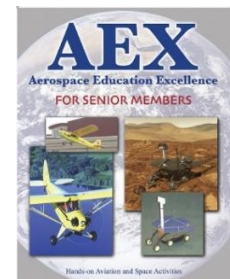
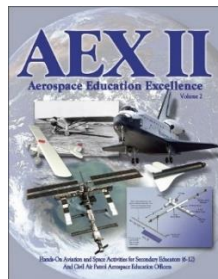
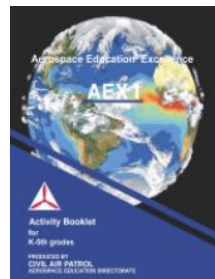
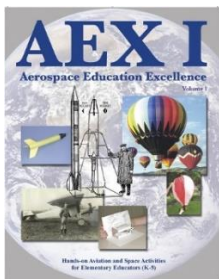


I am excited about the engagement we’ll get from the members, especially the cadets. I hope that this approach will spur more interest and result in higher participation. During this time we all need to be flexible and offer some new approaches if we are going to maintain a quality AE program. In the meantime, please feel free to reach out to me and I can provide a more detailed description of how this Home AEX Kit program was developed.

—00—00—0—00—00—

AE DOWNLOADS & RESOURCES

<https://www.capnhq.gov/CAP.AEDownloads.Web/>



The activities used in the above AEX Home Kit are part of the Civil Air Patrol's Aerospace Education program. This program is free to its members and it includes a series of engaging and hands-on aviation and space-related activities for both cadets and senior members. The program is called AEX, and the acronym stands for "**Aerospace Education EXcellence**". AEOs can request full-color books that feature national standards-based aerospace activities - or - download them in ***AE Downloads and Resources***.

The activities feature complete lesson plans that include background information, the learning objectives, a materials list, complete step-by-step instructions (pictorial and written) and the exercise. To earn the AEX award you must complete six activities (from any of the AE resources or an aerospace education lesson plan of your choice) during the fiscal year and complete at least a two-hour field experience (such as a space day, a virtual aerospace-related field trip, model rocket launch, etc.) to earn color certificates for your cadets and senior members. ***Please contact Capt Dicht if you would like to learn more and also how several activities can be conducted virtually.***

GREATER NEW YORK CHAPTER NINETY-NINES

RECOGNIZED WITH BREWER AWARD



In a virtual ceremony held on 21 December 2020, the Northeast Region presented the **2020 Frank G. Brewer Memorial Aerospace Award** to the **Greater New York Chapter Ninety-Nines** (GNY99s). The GNY99s is one of aviation's oldest and most admired organizations and they were recognized for *"Distinguished Service in the Field of Aerospace Education,"* specifically for the sustained, outstanding programs offered to women aviators, students and Girl Scouts in the Greater New York City area.

Formed in 1965, the GNY99s has, as part of its educational outreach, conducted workshops, distributed aviation education materials, and developed programs to encourage learning and interest in aviation careers. The GNY99s have made use of CAP AE materials in their presentations and included women CAP officers and cadets in their educational programs to inspire the girls participating.

The GNY99s also work closely with the Girl Scouts and local schools to introduce as many girls as possible to aviation. All of their programs are designed to provide aspiring female aviators with an appreciation and understanding of aviation concepts and inspire them to futures in aerospace, whether as pilots, engineers, air traffic controllers, designers or aviation mechanics.

Col Jack Ozer, Commander of the Northeast Region, commented that "The Awards Review Board was impressed with the long-term effort and dedication of the Greater New York Chapter to aerospace education."



Chair Deb Henneberry Accepting the Award



"The Board is proud that our chapter was selected as the 2020 recipient of the prestigious Frank G. Brewer Award," said Deb Henneberry, Chair of the Greater NY Chapter Ninety-Nines. "This is welcome recognition of the dedicated work of our women pilots in involving girls and young women in aviation and promoting aerospace education."

The New York Wing extends its congratulations to the GNY99s for its continued service in support of aerospace education and its recognition with the Frank G. Brewer Award.

EDITORIAL STAFF: (from left to right)

Lt Col Anita Martin, NYW DAE; Lt Col Marilyn Rey, NYW DAE Emeritus.

Lt Col George Geller, AEO (I); Capt Burt Dicht, NYW AEO (A), NYCG AEO



For questions or comments about any of this issue's topics or contributions to a future issue, please

email: amartin31392cap@juno.com

—oo—oo—O—oo—oo—

Solution – “It’s All in the Name”

	M		P		S	
Constellations	Mensa		Pavo	Perseus	Sagitta	Scutum
	Microscopium		Pegasus	Phoenix	Sagittarius	Serpens
	Monoceros		Piscis Austrinus		Scorpius	Sextans
	Musca		Pictor	Puppis	Sculptor	
			Pisces	Pyxis		
Stars	Markab	Mirach	Proxima Centauri		Sceptrum	Spica
	Megrez				Sigma Octantis	
	Mintaka		Pollux		Sirius	SS433
	Mira		Polaris		Sirius B	The Sun
Planets	Mercury		Pluto		Saturn	
	Mars					
Moons	Moon		Pandora	Portia	Sinope	
	Mimas		Pasiphae	Puck		
	Miranda		Phobos			
			Phoebe			
Asteroids	Melpomene [Asteroid 18]		Pallas [Asteroid 2]		Sisyphus [Asteroid 1866]	
	Metis [Asteroid 9]		Parthenope [Asteroid 11]			
	Midas [Asteroid 19981]		Patientia [Asteroid 451]			
			Patroclus [Asteroid 617]			
			Phaethon [Asteroid 3200]			
			Priamus [Asteroid 884]			

